

Patent Claims

1. Process for producing moulded parts from plastic by means of a device having a first and a second mould plate, having the following process steps:

- 5 - clamping the device in such a way that the first mould plate (1') is moved in the direction of the second mould plate (2') until the mould plates (1', 2') make contact at stop faces (9, 10);
- 10 - further clamping the device in such a way that the first mould plate (1') approaches the second mould plate (2') through a tilting movement;
- 15 - injecting plastic into the cavity (15) which is formed between the first mould plate (1') and the second mould plate (2') before and/or during the tilting movement;
- 20 - causing the two mould plates to be released from one another in the region of the stop faces (9, 10) shortly before termination of the clamping movement; and
- 25 - parallel clamping of the two mould plates.

2. Process according to Claim 1, characterized in that shortly before termination of the clamping movement a force is reduced which holds the two mould plates (1', 2') together at the stop faces (9, 10) during the tilting movement.

3. Process according to Claim 1 or 2, characterized in that the release of the stop faces (9, 10) is performed in conjunction with a remaining clamping path of less than 1 mm.

4. Process according to one of the preceding claims, characterized in that after the release of the mould plates (1', 2') the first mould plate (1') is shifted in the direction away from the second mould plate (2') in a defined movement which is determined by virtue of

the fact that an axis of rotation of the first mould plate (1') is mounted in an axial guide (18) displaceably in the normal direction to the second mould plate (2') and at the same time rotatably.

5

5. Process according to one of the preceding claims, characterized in that the transition from the tilted position of the first mould plates (1', 2') into the parallel position of the mould plates (1', 2') is carried out by means of targeted control of a force compressing the two mould plates (1', 2'), or of the injection pressure accompanied by mould breathing.

10 15 6. Process according to one of the preceding claims, characterized in that no plastic is pressed back into the cavity (15) during parallel clamping of the mould plates (1', 2').

20 25 7. Process according to one of the preceding claims, characterized in that the moulded part is an optical moulded part.

8. Process according to one of the preceding claims, characterized in that the moulded part is a multi-component mould part which has a surface material, in particular film or fabric, onto which the moulded part is moulded.

9. Device for producing moulded parts from plastic, 30 which has:

- a first mould plate (1') mounted rotatably about an axis of rotation, and a second mould plate (2'), which are tilted relative to one another in an open state and make contact with one another at stop faces (9, 10),
- an axial guide (18) in which the axis of rotation of the first mould plate (1') is mounted rotatably

and at the same time guided displaceably in the normal direction to the second form plate (2'),
- means for exerting a force (6) which, in the event
of a clamping movement for which the first mould
5 plate is tilted in the direction of the second
mould plate (1', 2'), holds the two mould plates
together at the stop faces (9, 10), and
- a control means which causes two mould plates (1',
2') to be released from one another shortly before
10 termination of the clamping movement in the region
of the stop faces (9, 10).

10. Device according to Claim 9, characterized in that
the control means lowers the force (6) which holds the
15 two mould plates (1', 2') together during the tilting
movement at the stop faces (9, 10).

11. Device according to one of Claims 9 or 10,
characterized in that the axial guide (18) is formed as
20 a support extending substantially perpendicular to the
second mould plate (2') and having a longitudinal
through-hole (20) as an axial holder.

12. Device according to one of Claims 9 to 11,
25 characterized in that the second mould plate (2') has a
guiding cutout (19) into which the axial guide (18)
dips upon the approach of two mould plates (1', 2').

13. Device according to one of Claims 9 to 12,
30 characterized in that the axis of rotation of the first
mould plate (1'), which is mounted rotatably, is fixed
in the region of the first mould plate (1') near the
gate.

35 14. Device according to one of Claims 9 to 13,
characterized in that the second mould plate (2') is
designed as a mould core plate, and a plastics feed

unit (5) for injecting plastic into the cavity (15) is arranged in the edge region of a mould core (4).

15. Device according to one of Claims 9 to 13,
5 characterized in that the second mould plate (2') is designed as a cavity mould plate, and a plastics feed unit (5) for injecting plastic into the cavity (15) is arranged in the edge region of a cutout (3).